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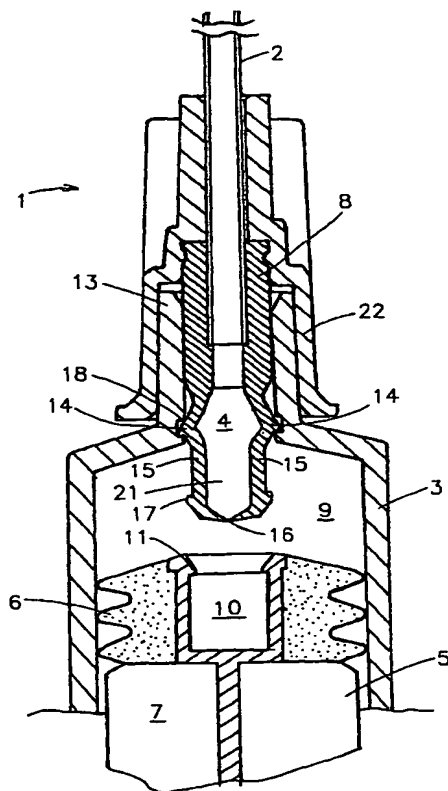
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- (71) Applicant (*for all designated States except US*): **ADVANCED PROTECTIVE INJECTION SYSTEMS B.V.** [NL/NL]; 39, Hooikade, NL-2514 BK Den Haag (NL).
- (72) Inventors; and
(75) Inventors/Applicants (*for US only*): **GOOSSENS, Bjorn, Olaf** [NL/NL]; 39, Hooikade, NL-2514 BK Den Haag (NL). **LUCAS, Jan, Hendrik** [NL/BE]; 5, Kemphaanlaan, B-2960 Brecht/St. Job (BE).
- (74) Agent: **DU PONT, J.**; Exter Polak & Charlouis B.V., P.O. Box 3241, NL-2280 GE Rijswijk (NL).
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[Continued on next page]

(54) Title: INJECTION SYRINGE WITH RETRACTABLE NEEDLE



(57) Abstract: The present invention relates to an injection syringe with retractable needle, at least comprising: a liquid container with an outlet opening; a needle with needle mount which is or can be secured in or on the outlet opening of the liquid container; a blocking means which is designed to block the needle mount in the outlet opening, which blocking means can only be unblocked by the needle mount with needle being retracted into the liquid container.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL 03/00699

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M5/32 A61M5/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 221 262 A (KITE JOHN P) 22 June 1993 (1993-06-22) column 4, line 15 - line 43 figures 1,2,4	1,3,4,18
A	-----	11
A	WO 02/26295 A (NICODEL S A ;MASTORAKIS EMMANUEL (MC)) 4 April 2002 (2002-04-04) cited in the application page 11, line 3 - line 5 page 13, line 8 - line 13 figures 4A,7	1,2,5
A	-----	1,2
	GB 2 332 628 A (LIU WEN NENG) 30 June 1999 (1999-06-30) page 9, line 8 - page 10, line 6 page 12, line 23 - page 13, line 2 figures 7,8,10,11,15-17 ----- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

8 March 2004

Date of mailing of the international search report

14 MAY 2004

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Sedy, R

INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL 03/00699

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 432 082 B1 (CHEN CHO-YING) 13 August 2002 (2002-08-13) figures 4A-4C	1,11
A	----- WO 00/27450 A (MDC INVEST HOLDINGS INC ;BOTICH MICHAEL (US); HALSETH THOR (US)) 18 May 2000 (2000-05-18) page 4, line 1 - line 4 figures 1B,1C -----	12,13,17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NL 03/00699

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-17, 18

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17,18

1.1. claims: 1-17

Injection syringe with retractable needle, having a liquid container, a needle with needle mount and a blocking means which can only be unblocked by the needle mount with needle being retracted into the liquid container (purpose: avoid pain to the patient at the end of an injection stroke)

1.2. claim: 18

Needle mount (purpose: coupling between a needle and an outlet opening of a syringe)

2. claims: 19-21

Securing element provided with a spring member-blocking means (purpose: to prevent unintentional pressure being applied to the needle mount)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/NL 03/00699

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5221262	A	22-06-1993	AU 628814 B2	24-09-1992
			WO 8909075 A1	05-10-1989
			CN 1036510 A	25-10-1989
			GB 2234177 A ,B	30-01-1991
			IE 62062 B1	14-12-1994
			KR 9402246 B1	19-03-1994
			NZ 228388 A	28-07-1992
			AU 2449888 A	28-09-1989
			AU 3439989 A	16-10-1989

WO 0226295	A	04-04-2002	AT 254940 T	15-12-2003
			AU 2849401 A	08-04-2002
			BR 0116394 A	02-03-2004
			CA 2432547 A1	04-04-2002
			CN 1455689 T	12-11-2003
			DE 60101307 D1	08-01-2004
			DK 1244484 T3	22-03-2004
			WO 0226295 A2	04-04-2002
			EP 1244484 A2	02-10-2002
			US 2002173751 A1	21-11-2002

GB 2332628	A	30-06-1999	AU 735953 B2	19-07-2001
			BR 9800676 A	16-11-1999
			CA 2223188 A1	29-06-1999
			DE 29800200 U1	12-03-1998
			FR 2772621 A1	25-06-1999
			ZA 9800169 A	09-07-1999
			AU 4923897 A	15-07-1999

US 6432082	B1	13-08-2002	NONE	

WO 0027450	A	18-05-2000	AU 1609500 A	29-05-2000
			WO 0027450 A1	18-05-2000
